

DEPARTMENT OF BUILDING AND DEVELOPMENT

COUNTY OF LOUDOUN

MEMORANDUM

DATE: April 20, 2010

TO: Marchant Schneider, Project Manager

FROM: Todd Taylor, Environmental Review Team *TT*

THROUGH: William Marsh, Environmental Review Team Leader *WM*

CC: Theresa Stein, Zoning Planner
Joe Gorney, Community Planner, Department of Planning

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APR 20 2010

LOUDOUN COUNTY
DEPARTMENT OF PLANNING

**SUBJECT: ZMAP-2010-0001 and SPEX-2010-0003
HS-7 Dulles South and Elementary School**

The Environmental Review Team (ERT) reviewed the subject application during the April 12, 2010, ERT Meeting. A site visit was also conducted on April 15, 2010. Our comments pertaining to the current application are as follows:

Regarding tree cover

- 1) Staff reviewed the Forest Management Plan & Cover Type Map, prepared by Zimar & Associates, Inc., dated February 15, 2005. Cover Type 1, consisting of upland hardwoods, located in the southern portion of the property, is the most desirable tree cover for preservation on the subject property. The hardwood tree stand corresponds to the proposed elementary school site. Staff recommends exploring all opportunities to preserve portions of the tree stand within the development layout, including perimeter buffers and a pocket tree save area separating the elementary school site from the high school baseball and softball fields (adjacent to the phase line). Attachment A provides an example pocket tree save area. [Revised General Plan (RGP) Forests, Trees, and Vegetation Policy 1]
- 2) During the site visit, it was noted that larger trees within the above referenced hardwood stand were tagged with an identification number. However, no individual tree information was provided with the Forest Management Plan & Cover Type Map report. For Cover Type 1, please identify all potential specimen trees with a diameter at breast height (DBH) of 30 inches or more on Sheet 3. Please also provide a corresponding table identifying scientific and common names, DBH, and condition rating. [RGP Forests, Trees, and Vegetation Policies 1 and 9]

- 3) Assuming the elementary school layout will not be adjusted to preserve the majority of Cover Type 1, staff recommends that the applicant recapture the loss tree canopy by committing to reforestation efforts on the subject property. Staff has identified the following two reforestation opportunities, in order of preference (see Attachment B and Photographs 1 and 2): 1) open floodplain immediately adjacent to the South Fork of Broad Run; and 2) open areas within the 50-foot GI Buffer, adjacent to the intermittent stream in the western portion of the property. As stated on Page 5-32 of the RGP, "riparian forests along streams provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment".

Staff recommends that the reforestation commitment specify the following: 1) the applicant shall work with the County Urban Forester on the development of the reforestation plan; 2) the reforestation plan shall be submitted to the County Urban Forester for review and approval prior to the approval of the first site plan; 3) plant material shall consist of 3-gallon containerized native trees, unless County staff determines smaller material (live stakes, bare root seedlings, etc.) is appropriate; 4) the reforestation shall be implemented prior to issuance of the first certificate of occupancy; 5) the applicant shall ensure a minimum of 80 percent of the initial planting is determined to be established after two growing seasons; 6) an annual inspection shall be conducted by the applicant and the County Urban Forester to verify establishment; and 7) if the 80 percent establishment isn't achieved after the second growing season, a onetime planting to bring the project to full stocking shall be conducted by the applicant.

- 4) To complement the protection of the eastern stream provided by the wetland preservation easement, which is mostly on the eastern side of the stream, staff recommends providing a tree save area that corresponds to the 50-foot GI Buffer on the western side of the stream. [RGP Forests, Trees, and Vegetation Policy 1 and River and Stream Corridor Policy 7]

Regarding water quality

- 5) For the proposed bus parking area, ERT recommends installation of an oil-water separator to treat all runoff, above and beyond other best management practice (BMP) measures required. These areas are consistent with "fleet storage areas," a hotspot use identified in FSM Section 5.320.E.1d.
- 6) To provide enhanced water quality protection, staff recommends that any proposed stormwater management (SWM)/BMP extended detention ponds (dry ponds) be designed as enhanced extended detention ponds (dry ponds with shallow marsh plantings). [Revised 1993 LCZO Section 6-1310(H) and RGP Surface Water Policy 5]

- 7) Note 20 on Sheet 1 states that bioretention is proposed within the site to encourage infiltration and groundwater recharge. Please identify potential bioretention locations on Sheet 3. Staff recommends directing stormwater runoff to bioretention facilities corresponding with moderately well to well drained soils located on the property. [RGP Surface Water Policy 2]
- 8) Please identify the shaded polygon depicted on Sheet 3, northwest of the high school stadium.
- 9) The regional SWM/BMP facility is located on-line with a jurisdictional stream, which is problematic. On-line SWM/BMP facilities are typically not permitted by the U.S. Army Corps of Engineers and Virginia Department of Environmental Quality. Staff recommends relocating the facility. [RGP River and Stream Corridor Resources Policies 11 and 23]

Regarding steep slopes

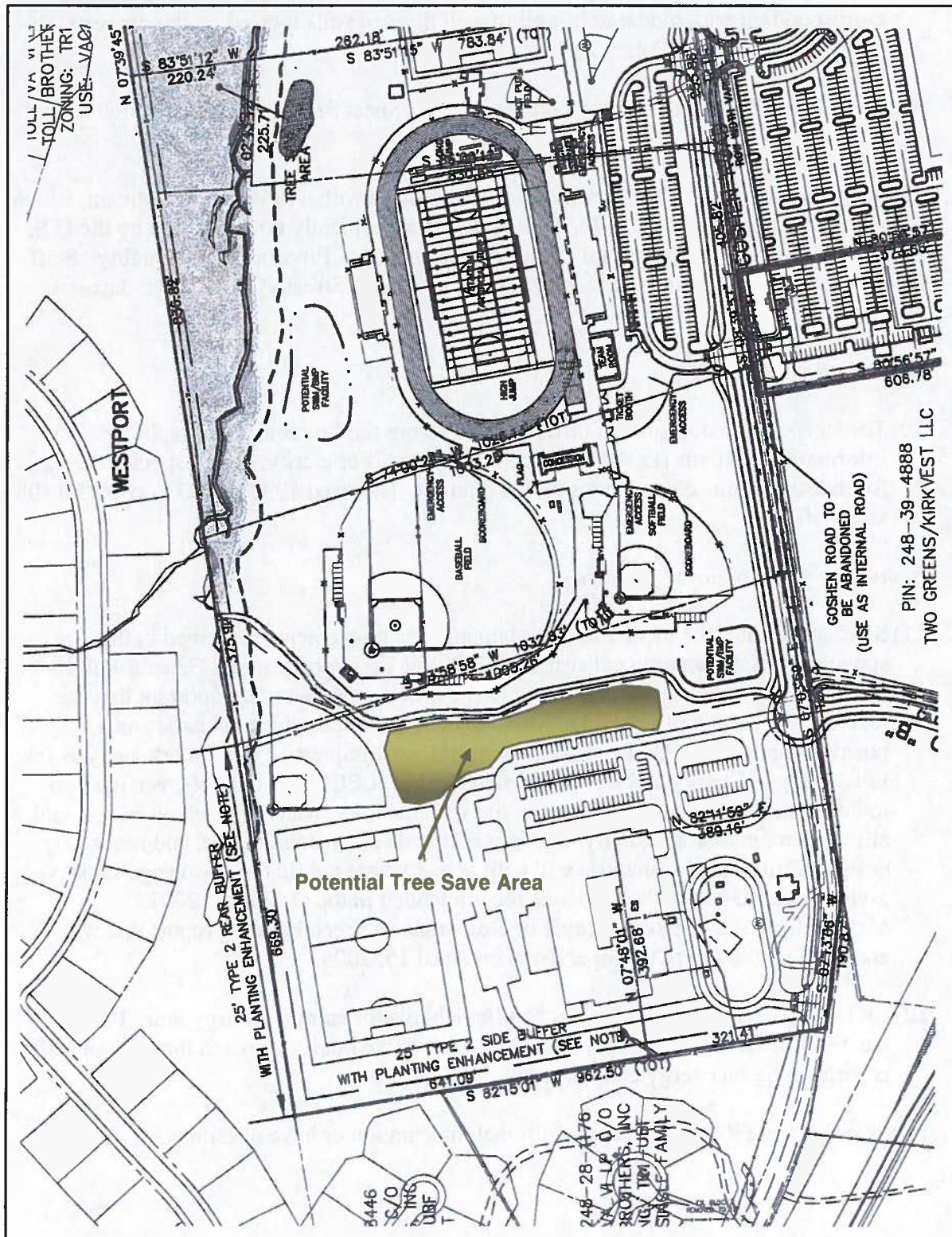
- 10) The steep slopes designation differs slightly from the Loudoun Geographic Information Systems (LOGIS) steep slopes layer. For clarity, please specify the basis for the steep slope designations on the plan set. [Revised 1993 LCZO Section 5-1508 and 6-407]

Regarding green building practices

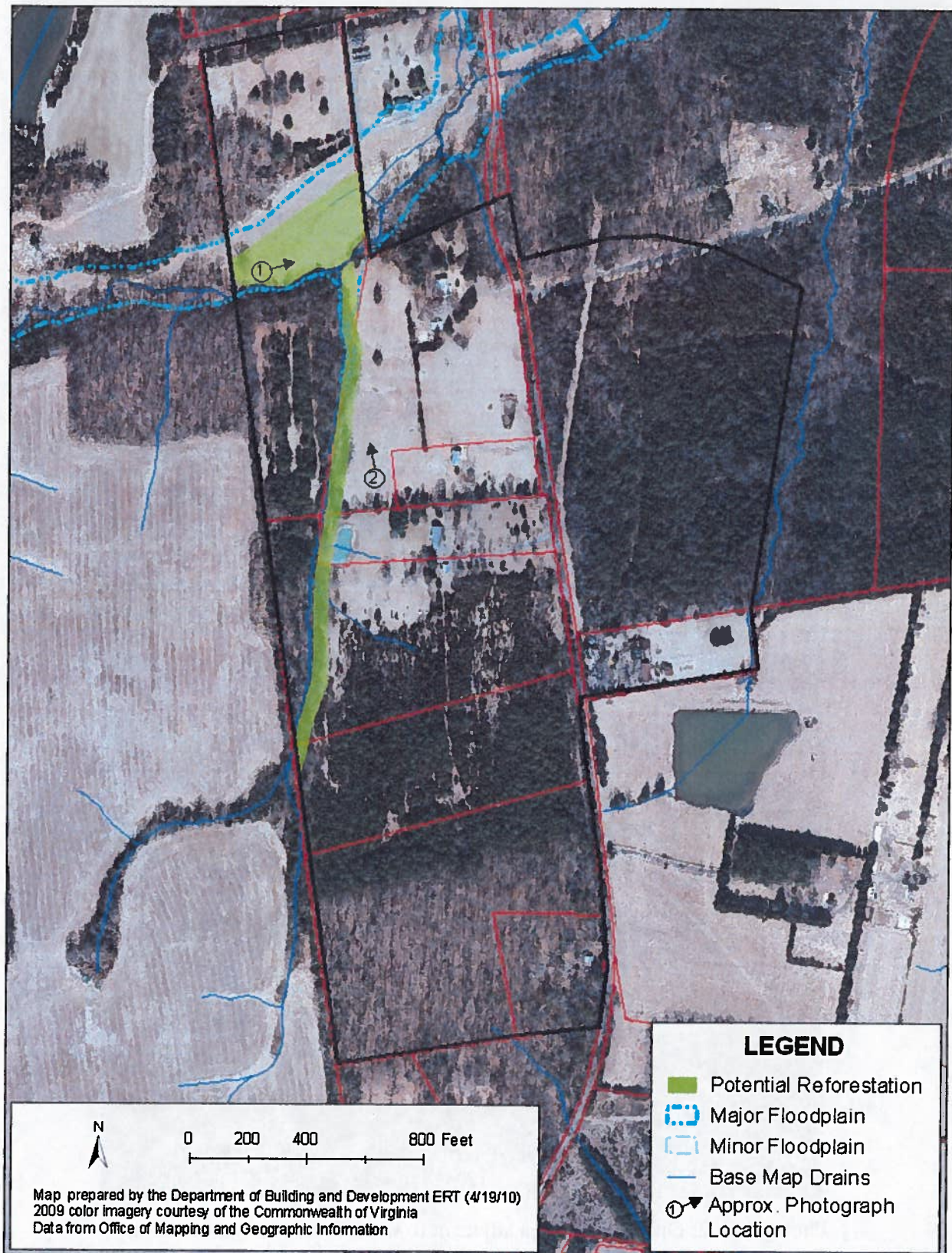
- 11) Staff appreciates the inclusion of sustainable design elements described in the statement of justification, consistent with Public Facilities text and General Public Facilities Policy 3 on page 3-6 of the RGP, which state that it is important that the location and design of public facilities set the highest possible standards and a positive example. With the second submittal, staff requests a benchmark analysis for Leadership in Energy and Environmental Design (LEED) for Schools, version 3 to indicate desired design outcomes for site sustainability, water efficiency, energy and atmosphere, indoor air quality, efficient materials and resources use, and innovative design. Providing the analysis will help assess where public facility design ranks vis-à-vis the LEED "silver" goal that is recommended in the December 2007 Metropolitan Washington Council of Governments green building report that was endorsed by the Board of Supervisors on April 15, 2008.
- 12) ERT commends Loudoun County Public Schools for earning Energy Star "Partner of the Year" for 2009 and deeply respects the effective public outreach that school staff is performing on energy conservation.

Please contact me if you need any additional information or have questions.

ATTACHMENT A – EXAMPLE POCKET TREE SAVE AREA



ATTACHMENT B – POTENTIAL REFORESTATION AREAS





Photograph 1: Open floodplain area adjacent to the South Fork Broad Run



Photograph 2: Open buffer area adjacent to western intermittent stream